Claim 1 recites that an effective perforated-part area is at least 1.0 time the inner cross-sectional area of a core tube. The effective perforated-part area is calculated by multiplying the total area of the perforated parts in the core tube by the percentage of openings of one layer of a permeation-side passage material surrounding the core tube.

The Examiner asserts that both Cruz '528 and Schmidt '641 provide for the claimed effective perforated-part area. Citing U.S. Patent No. 6,702,941 to Haq *et al.* ("Haq '941"), the Examiner asserts that it was common engineering practice to configure a spiral separation membrane element so that it would satisfy the claimed effective perforated-part area. As an example, the Examiner asserts that Example 5 of Cruz '528 provides for the claimed effective perforated-part area.

Applicants respectfully submit that both Cruz '528 and Schmidt '641 fail to teach or suggest the claimed effective perforated-part area. Both Cruz '528 and Schmidt '641 fail to explicitly teach the claimed effective perforated-part area.

Further, material not explicitly described in the cited art must necessarily be present in the cited reference to establish that such material is in fact present in the reference. *See* MPEP 2112 (2005) (emphasis added). It is not sufficient that such material may be present in the reference. *Id.* (emphasis added).

With respect to Cruz '528, Cruz '528 fails to necessarily provide for an element that provides for the claimed effective perforated-part area. Example 5 of Cruz '528 fails to teach the inner diameter of the central tube. *Id.* Example 5 of Cruz '528 also fails to teach the total area of perforations drilled in the central tube. *Id.* Example 5 of Cruz '528 also fails to teach the percentage of openings of one layer of the perforation-side passage material. *See*, page 19, line 2

to page 20, line 2. Further, there is no basis in Cruz '528 for the assumption that the percentage of openings of the spacer thereof is 50 %. Furthermore, Cruz '528 fails to disclose setting the total area of the perforated parts in the core tube and the percentage of one layer of the permeation-side passage material. In the absence of such teachings, Cruz '528 cannot necessarily provide for the claimed effective perforated-part area. As a result, Cruz '528 fails to teach or suggest the claimed effective perforated-part area.

Additionally, the calculations on page 4 of the Office Action do not provide for the area of the perforated-part of the tube. The multiplication of 10 by 6π results in the surface area of the tube over which the openings are to be provided. This is different from the area of the perforated-part of the tube.

Schmidt '641 also fails to necessarily provide for a wound pocket module that would necessarily provide for the claimed effective perforated-part area. Schmidt does not teach the percentage of openings in its permeate spacers 15. In this regard, Cruz '528 and Schmidt '641 both fail to provide for the claimed effective perforated-part area.

Furthermore, Haq '941 fails to teach or suggest the claimed effective perforated-part area. Haq '941 is relied upon to teach as follows:

> In order to prevent the perforations from acting as a flow restriction during dead end filtration, the total area of the perforations 71 is preferably at least as large as the cross-sectional area of the portions of the upper end face of the filter pack 20

See col. 26, lines 47-55. Haq '941 fails to disclose the percentage of openings of a permeation side passage material surrounding a core tube. In this regard, Haq '941 cannot provide for the effective perforated-part area, as the effective perforated-part area is calculated by multiplying the total area of the perforated parts in the core tube by the percentage of openings of a

permeation side passage material. A person of ordinary skill in the art cannot determine the percentage of openings from the total area of the perforations 71 as disclosed in Haq '941.

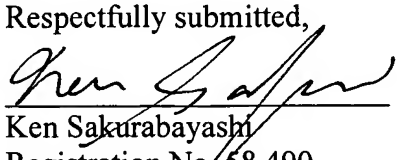
Haq '941 also fails to disclose the particular direction of the treated solution permeating the openings thereof or the pressure applied to the tube. In this regard, Haq '941 fails to provide guidance as to the appropriate area of openings of the tube for structures other than its own filler element. As a result, a person of ordinary skill in the art would not have been motivated to apply the design of Haq '941 to the structures disclosed Cruz '528 or Schmidt '641.

For at least the above reasons, it is respectfully submitted that claims 1-3 are patentable over the cited art, and withdrawal of the rejection is respectfully requested.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



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